

The Use of Episiotomy in Obstetrical Care: A Systematic Review

Summary

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Introduction

Episiotomy, incision of the perineum at the time of vaginal childbirth, is a common surgical procedure experienced by women in the United States.¹ Based on national hospital discharge data for 1999, just over 35 percent of women who gave birth vaginally had an episiotomy performed; the figure was approximately 33 percent in 2000.^{2,3}

Despite several decades of research, which many interpret as definitive evidence against routine (or “liberal”) use of episiotomy, little professional consensus has developed about the appropriateness of routine use. Lack of consensus is illustrated by variation in rates of use, ranging from 13.3 percent to 84.6 percent in one study with a prospectively enrolled low-risk population, with an average of 51 percent among spontaneous term births.⁴ Variation has been reported by type of clinician,⁴ time of day,⁵ and facility type, size, and location.⁶ Wide practice variations suggest that episiotomy use is heavily driven by local professional norms, experiences in training, and individual provider preference rather than variation in the physiology of vaginal birth. The goal of this synthesis is to inform care providers, professional organizations, advocates, and individual women about the current state of the evidence on routine use of episiotomy.

Key Questions

The RTI–UNC EPC addressed the following Key Questions (KQs):

KQ 1. Does the practice of liberal or routine episiotomy, compared to more selective

use of episiotomy, influence maternal postpartum outcomes?

KQ 2. Does episiotomy incision type (i.e., midline or mediolateral) influence the risk of maternal morbidity?

KQ 3. Does the repair of the perineal defect (i.e., suture type and repair approach) influence the risk of maternal morbidity?

KQ 4. Does episiotomy have a long-term impact on urinary incontinence, fecal incontinence, or pelvic floor defects?

KQ 5. Does episiotomy or incision type, or both, influence future sexual function?

Methods

Inclusion and Exclusion Criteria

We excluded studies that (1) did not report on women of reproductive age, (2) were published in languages other than English, (3) did not report information pertinent to the key clinical questions, (4) had fewer than 40 subjects, and (5) were not original studies. Criteria for study design were based on sufficiency and quality of evidence. KQs 1 and 3 have been more commonly examined in randomized controlled trials (RCTs); thus, we elected to limit searches to RCTs. KQs 2, 4, and 5 have been studied less extensively in trials; therefore, we included both RCTs and prospective cohort studies.

Literature Search and Retrieval Process

We used standard electronic databases: MEDLINE®, Cochrane Collaboration resources, and the Cumulative Index to Nursing and Allied Health Literature (CINAHL®). We reviewed



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reference lists of relevant articles and consulted with the Technical Expert Advisory Group (TEAG) to obtain additional relevant articles. We conducted a dual review for abstracts and a single review for full articles to decide inclusion according to preset criteria.

Development of Evidence Tables and Data Abstraction Process

Abstractors trained themselves on entering data into evidence tables by abstracting several articles and then reconvening as a group to discuss the utility of the table design. After several iterations and TEAG review, the final table design had all needed, appropriate categories for systematically recording information on the articles.

All team members did initial entry of information onto data abstraction forms. Another team member reviewed articles and edited all initial table entries for accuracy, completeness, and consistency. The two abstractors reconciled all disagreements concerning information in the abstraction tables. We then entered data from the abstraction forms into evidence tables and again checked for consistency and accuracy.

Quality and Strength of Evidence Evaluation

Rating the Quality of Individual Articles

Two article abstractors independently rated each article on each of the categories on our quality assessment form. A third reviewer reviewed the scores and flagged studies with differences in scoring on individual components. We reconciled these differences by consensus.

Grading the Strength of Available Evidence

Our scheme follows the criteria utilized by Berkman et al.⁷ That system included three domains: quality of the research, quantity of studies (including number of studies and adequacy of the sample size), and consistency of findings. Grades were assigned by consensus of the four senior staff members.

External Peer Review

As is customary for all evidence reports and systematic reviews done for AHRQ, the RTI–UNC EPC requested review of this report from a wide array of outside experts in the field and from relevant professional societies and public organizations. We compiled comments from 18 respondents and addressed each one individually, revising the text as appropriate.

Results

Literature Search Yield

The literature search yielded 986 articles. Of these, we excluded 659 articles after reviewing the abstracts. Of the remaining 327 articles, we included 45 in our evidence report. Of these, 7 address KQ 1, 1 addresses KQ 2, 20 address KQ 3, 15 address KQ 4, and 10 address KQ 5.

Key Question 1: Episiotomy and Maternal Postpartum Outcomes

Seven primary publications of RCTs addressed liberal versus restrictive use of episiotomy.⁸⁻¹⁴ Each trial compared two study arms or groups: (1) an intention to restrict routine use of episiotomy and (2) a liberal-use policy that endorsed routine use. Use of episiotomy in the restrictive groups ranged from lows of 7.6 percent⁹ and 10.2 percent⁸ to highs of 44 percent¹¹ and 53 percent.¹³ We emphasize that these trials compared policies of episiotomy use, not episiotomy to no episiotomy; six of the seven studies used mediolateral episiotomy.

This literature has high internal consistency with respect to the postpartum effects of differing strategies for episiotomy use. Compared to women in liberal-use groups, women in the restrictive-use groups had less severe posterior perineal trauma, less need for suturing, higher probability of having an intact perineum, no greater or lesser risk of wound healing complications, and higher likelihood of resuming intercourse earlier.

Key Question 2: Episiotomy Incision Type and Maternal Morbidity

Only one RCT compared outcomes of midline episiotomy to those of mediolateral episiotomy.¹⁵ An additional focused literature search did not reveal any prospective cohort studies on this issue. Women in the midline group began sexual intercourse significantly earlier and had a significantly better cosmetic appearance of the scar than women in the mediolateral group. The groups did not differ significantly on pain or satisfaction from sexual intercourse. Women receiving midline episiotomy also had a significantly greater probability of anal sphincter injuries than women in the mediolateral episiotomy group. This study did not assess fecal incontinence as a long-term health outcome. Because of considerable methodologic flaws, any conclusions must be drawn cautiously.

Key Question 3: Repair of Perineal Defect and Maternal Morbidity

We included 17 RCTs (in 21 articles) examining various methods and materials for repairing perineal defects; virtually all episiotomies in these trials were mediolateral.^{16,17,17-35}

Four trials investigated techniques of repair.^{17,27,29,32,35} Two compared a two-layer approach (leaving the perineal skin unsutured) with a three-layer approach (suturing the perineal skin); two others compared a continuous (subcutaneous) technique with an interrupted (transcutaneous) technique.

Fourteen trials investigated materials for repair;^{19 16,17,20-23,25-28,30-34} eight compared polyglycolic-acid sutures with chromic-catgut sutures, both absorbable; two compared absorbable sutures (one polyglycolic acid and one chromic catgut) with an enbucrilate tissue adhesive (Histoacryl®); two compared standard absorbable suture material with its rapidly absorbed

counterpart; and one compared untreated chromic catgut with a glycerol-treated “softgut” chromic catgut. In addition, two trials compared nonabsorbable and absorbable sutures: one compared silk sutures with polyglycolic-acid sutures and one compared silk sutures with both polyglycolic-acid and chromic-catgut sutures.

Finally, two trials combined comparison of both techniques and materials in their design.^{18,24}

Most of these trials randomly allocated participants to one of two groups. However, three trials incorporated a factorial design of randomization. Using a 2x2 design, both the so-called Ipswich Childbirth Study^{29,30,32} and the Kettle et al. trial³⁶ randomized to methods of repair and type of sutures. The Mahomed et al. perineal suture study used a 2x3x2 design and randomized to suture type for deep tissue repair (two groups), suture type for the perineal skin (three groups), and method of repair (two groups).²⁷

Methods

Two-layer vs. three-layer repair. The trials provided consistent evidence that favored the two-layer approach; differences between the two approaches were not always statistically significant.^{29,32,35}

Despite some limitations, collectively these trials suggest that less overall perineal morbidity is associated with the two-layer repair approach than with the traditional three-layer approach. The reduction in pain, need for analgesia, wound healing problems, and sexual morbidity as well as a decrease in the time and cost required for initial suturing of the perineal skin, removal, and possible resuturing, may make the two-layer approach more beneficial than the three-layer approach.

Continuous vs. interrupted sutures. Two good-quality trials produced inconsistent evidence that the continuous method of repair has less perineal morbidity and more patient satisfaction associated with it than the interrupted method.^{17,27} In both trials, the authors describe greater familiarity with the interrupted method of repair. One clinical group even suggests that their inconsistencies with other trials might be attributable to lack of practice with the method and subsequent unpopularity with the operators that performed the repair.²⁷ Whether such differences in outcome arise for clinicians and women outside the United Kingdom, where methods of repair and training of those performing the repair could be different than in other countries, remains to be seen.

Materials

Absorbable vs. tissue adhesive. These two trials were small ($n < 65$ in both trials) and of poor quality because of poor randomization,^{16,33} but they defined and measured perineal pain well and achieved good followup. They contribute possible evidence that repair with tissue adhesive may decrease perineal pain in the immediate postpartum.

Absorbable sutures: standard vs. rapidly absorbed.

Mixed results from a good trial³⁶ and lack of significant differences between groups in a poor trial³¹ yielded insufficient evidence, pointing to a difference in perineal pain between standard and rapidly absorbed sutures. Stronger evidence indicated that women who had rapidly absorbed sutures required less removal of the material, presumably because it was absorbed into the skin quickly in the postpartum period. Although the two trials evaluated sexual functioning at different times, rapidly absorbed sutures may decrease the amount and severity of dyspareunia in the puerperium.

Untreated catgut vs. treated catgut. Only one trial addressed treated and untreated chromic catgut.²⁵ It produced no evidence that treated catgut is superior to untreated catgut with regard to perineal morbidity; in fact, treated catgut may be associated with higher morbidity (more perineal pain in the immediate postpartum period; painful sexual intercourse in the longer term).

Nonabsorbable vs. absorbable suture. Because of the study design of the fair-quality trial²³ and lack of control for possible confounding by method of repair, we cannot draw conclusions about the role of silk sutures in perineal morbidity from this trial. The authors concluded that the subcuticular method lent itself to short-term advantages but did not present supporting data. Thus, although this trial may contribute to a body of evidence about combinations of materials and methods, it does not contribute to the overall understanding of the role of suture materials in perineal morbidity, separate from methods of repair. The Mahomed et al. trial²⁷ found no differences between the two groups in the short-term postpartum period, but did find differences at 3 months, indicating a possible delayed effect of the suture material.

Polyglycolic acid vs. chromic catgut. In 2004, the Cochrane Library published a systematic review and meta-analysis of information on polyglycolic-acid versus catgut suture material for repair of perineal trauma.³⁷ The authors reported that polyglycolic-acid sutures were associated with less pain in the short-term postpartum period (odds ratio [OR] = 0.62; 95% confidence interval [CI], 0.54-0.71) and with less need for analgesia (OR = 0.63; 95% CI, 0.52-0.77), but groups did not differ in long-term pain outcomes or reports of dyspareunia.

Our systematic review includes six of the eight trials that appeared in the Cochrane review and two additional trials. Overall, the evidence is from a combination of poor, fair, and good trials; it is consistent with the previous Cochrane review. Polyglycolic-acid sutures are associated with less perineal pain, less need for analgesia use, and fewer healing problems in the short term. Long-term outcomes do not differ substantially between polyglycolic-acid sutures and chromic catgut. One trial not in the Cochrane review reported more perineal pain and dyspareunia in the polyglycolic-acid group at 6 months,³⁴

an outcome the authors attributed to the slower absorption rate of polyglycolic-acid sutures; however, these results were neither statistically significant nor precise. Overall, the body of evidence about polyglycolic-acid versus chromic-catgut sutures suggests that polyglycolic-acid sutures offer many short-term advantages.

Combined methods and materials. Two trials compared entire approaches, combining both materials and methods in a single randomization design.^{18,24} The poor trial¹⁸ found no differences between the groups; the fair-quality trial²⁴ found that women repaired with polyglycolic-acid sutures using a continuous, subcuticular approach suffered less perineal morbidity. This result is consistent with other trials that investigated subcuticular suturing and polyglycolic-acid sutures separately, perhaps reinforcing the notion that this method and suture type are superior to other options available to obstetric clinicians.

Key Question 4: Episiotomy and Urinary Incontinence, Fecal Incontinence, and Pelvic Floor Defects

Sixteen publications prospectively collected data about some aspect of continence or pelvic floor muscle function with good documentation of perineal status and episiotomy use at the time of the index birth. Outcomes of interest included physiologic measures of muscle strength, clinical urodynamic testing, or self-report by interview or questionnaire.

The 16 publications include four reports from two RCTs of liberal versus restrictive use of episiotomy and 11 prospective studies of representative cohorts of women delivering at particular facilities or with a particular practice group (including two publications from a cohort of women who participated in an RCT of perineal massage versus none in the third trimester). One study of a cohort of all women in a region who had third-degree lacerations at the time of the index birth followed them to assess risk of fecal incontinence at 3 months.

All studies reflect the dominant practice patterns in the countries in which the studies were conducted. No study directly compared the influence of mediolateral versus midline (also called median) episiotomy on pelvic floor function or continence. For this reason, long-term differences in continence and pelvic floor muscle outcomes that would be anticipated secondary to differences in episiotomy type are unknown.

Randomized Controlled Trials

Both RCTs (Sleep and colleagues in the United Kingdom⁸ and Klein and colleagues in Canada¹¹) required providers to alter their use of episiotomy. These trials randomized women to “liberal use” or “restricted use” of episiotomy; the latter category intended to restrict use to circumstances such as fetal

distress or maternal exhaustion with an “unyielding perineum.” Both trials enrolled singleton, vertex presentation pregnancies at term and randomized in the delivery suite close to the time of birth.

Neither trial showed meaningful differences in varied measures of urinary incontinence such as subjective sensation of perineal bulging, perineometry readings, involuntary loss of urine, use of a pad, loss of urine with coughing, sneezing, laughing, and loss with urgent need to void. Neither trial collected data about continence of flatus or stool, descriptive data from physical examination, or urodynamic studies. Both research teams concluded that they did not observe any benefits associated with episiotomy. Klein and colleagues, using perineometry measures, also concluded that episiotomy fails to prevent pelvic floor relaxation.¹¹

Prospective Studies

The most global assessment of continence and pelvic floor function concluded that episiotomy is associated with lower pelvic floor muscle strength than spontaneous tears.³⁸ The clinical significance of this finding is unclear because all self-reported symptoms of urinary and anal incontinence and degree of prolapse on physical examination were equivalent across groups. Overall, episiotomy apparently did not protect against incontinence, prolapse, or decrements in pelvic floor muscle function by 3 months postpartum.

Studies focused on self-reported urinary continence.

Excluding the clinical trial populations and the Sartore et al. study above, five studies (in four study populations) evaluated self-reports of urinary continence.³⁹⁻⁴³ Overall, episiotomy and spontaneous-tear groups had the same frequency of incontinence symptoms; no evidence emerged that episiotomy prevents pelvic floor damage.

Studies focused on self-reported incontinence of stool or flatus. Three cohort studies asked women about rectal incontinence symptoms; one also conducted physical examinations.⁴⁴⁻⁴⁶ These authors focused on the high prevalence of anorectal dysfunction at 3 months with episiotomy as a key risk factor. None of these research teams found episiotomy to be statistically associated with reduced risk.

Studies focused on physiologic measures of pelvic floor function. Overall, none of these research teams concluded that episiotomy had advantages,^{29,47,48} and one identified a decrease in functional muscle strength. As intermediate measures, these findings concur with the self-report and clinical examination findings of other studies: essentially, episiotomy confers no benefits with respect to preserving continence or pelvic floor muscle function.

Key Question 5: Episiotomy and Future Sexual Function

Nine studies (in 10 publications) prospectively collected outcome data about sexual function among women who did or

did not have a routine episiotomy. One study compared incision type and assessed sexual function;¹⁵ three RCTs examined restrictive versus liberal use of episiotomy;^{8,11,49} one trial studied mediolateral versus median episiotomy;¹⁵ and five were prospective cohort studies.^{38,42,50-52} One study (the only study conducted in the United States), described by the authors as “retrospective,” included a single followup time point (6 months) with prospective data collection about sexual function.⁵³ Two publications reflect a primary analysis from an RCT with 3 months of followup⁸ and a secondary analysis after 3 years⁴⁹ in the same UK study population. In two publications with analyses of the same study population, a Canadian research team reported analyses of 3-month followup data: one on randomization to liberal or restrictive episiotomy groups, and the other on perineal trauma at the time of delivery by exposure group.^{11,52}

Apart from the one study directly comparing mediolateral to median episiotomy, all studies reflect the dominant practice patterns of the countries in which they were conducted. Thus, the literature reflects two distinct types of procedures, the effects of which need to be addressed separately.

Randomized Controlled Trials

Two publications from RCTs of restrictive compared to liberal use of episiotomy reported intention-to-treat analyses of long-term effects on the sexual outcomes of populations of women. In one study,⁸ by 1 month after delivery, 37 percent of the restrictive group and 27 percent in the liberal group had resumed sexual intercourse ($P < 0.01$). The proportion of women with resumption of intercourse by 3 months, current dyspareunia at 3 months, or any dyspareunia within the 3 months of followup did not differ significantly by group. By the third year of followup, the likelihood of “ever suffering painful intercourse” remained comparable across groups.⁴⁹

Klein and colleagues found less episiotomy use in the restrictive group with higher rates of spontaneous lacerations.¹¹ Women in the restrictive group resumed intercourse an average of 1 week earlier than those in the liberal group; however, all other measures of sexual function were equivalent by 3 months.¹¹ This team conducted a separate analysis of the relationship between degree of perineal trauma and sexual function using 3-month interview data. They regrouped participants by perineal status that had been systematically documented at the time of the index birth, creating a prospective cohort. Women with episiotomy had the slowest return to intercourse. Pain with the first intercourse followed a similar pattern.

Prospective Cohorts

These cohort studies did not find large or statistically significant differences in sexual function. Only one study identified lasting differences in dyspareunia at 3 months. Current dyspareunia at 3 months can be estimated from three of the cohort studies using 818 women with episiotomy and

938 women without episiotomy.^{38,50,51} A meta-estimate from the combined cohorts suggests that women with episiotomy are 54 percent more likely to have pain with intercourse 3 months after delivery, with an absolute increase in risk of dyspareunia of 5 percent among women who had episiotomy. The two studies that assessed any dyspareunia during the 3 months after childbirth revealed no difference in the overall probability of having had painful intercourse.

Discussion

Findings by Key Question

Key Question 1: Episiotomy and Maternal Postpartum Outcomes

Trials of fair to poor quality provide consistent findings that clearly support limited use of episiotomy. Routine episiotomy achieves no short-term goals that it has been hypothesized to achieve. Indeed, routine use is harmful to the degree that it creates a surgical incision of greater extent than many women might have experienced had episiotomy not been performed.

Key Question 2: Episiotomy Incision Type and Maternal Morbidity

A single study found that women with midline episiotomy had a significantly greater rate of anal sphincter injuries than women with mediolateral episiotomy.¹⁵ Treatment groups did not report differences in pain or satisfaction with intercourse at 3 months. Because of considerable methodological flaws in this trial (poor internal validity), any conclusions must be drawn cautiously. However, because differences in sphincter injury rates are clinically important, we consider the finding of increased risk of severe injury with midline episiotomy compared to mediolateral episiotomy to be relevant observational evidence.

Key Question 3: Repair of Perineal Defect and Maternal Morbidity

Limited but consistent evidence favored two-layer repair over three-layer repair; limited and inconsistent evidence favored continuous over interrupted sutures. Evidence was insufficient to comment on comparisons between standard and rapidly absorbed sutures, tissue adhesive and absorbable sutures, or nonabsorbable and absorbable sutures. We found no evidence that treated catgut is superior to untreated catgut with regard to perineal morbidity; the former may in fact be associated with higher morbidity. The evidence suggests short-term advantages for perineal repeat associated with the use of polyglycolic-acid sutures compared to chromic-catgut sutures.

Three major classes of suture material (nonabsorbable, absorbable, and tissue adhesive) and two subtypes of sutures (treated versus untreated and standard versus rapidly absorbed) were studied, all in the presence of different approaches to the method of suturing; thus, individual effects of the materials themselves cannot be examined. Likewise, methods of repair

were examined in the context of different materials both among and within studies for different stages of repair. We are unable to assess the true effects of a certain method of repair because we cannot tell whether outcomes are confounded or modified by suture material.

Key Question 4: Episiotomy and Urinary Incontinence, Fecal Incontinence, and Pelvic Floor Defects

These prospective studies did not identify improvements in continence for urine or stool or in pelvic floor muscle function among women who had had episiotomy compared to those who had not. This finding includes comparison to women who had spontaneous lacerations of similar severity. Several authors reported decrements in pelvic floor function among women who had had episiotomy. Only a single study, using multivariable models, found that episiotomy was an independent predictor of urinary continence.⁴¹ In the majority of other studies using multivariate models, adjusting for factors such as parity, neonatal weight, and length of second-stage labor, episiotomy was not an independent risk factor for incontinence. Taken in total, this literature, predominantly of fair to poor quality, does not support use of episiotomy for the purpose of preventing pelvic floor defects, urinary incontinence, or incontinence of stool or flatus.

These studies are limited because they do not follow women long enough to detect disease occurrence. At present, the assumption that intermediate variables, such as pelvic muscle strength measured by perineometry, urodynamic test results, or early reports of symptoms, can predict later disease has not been validated. Prospective evaluation only during the months after birth when the pelvic floor is still in a recovery and stabilization period may be misleading. Conclusions about whether episiotomy prevents or increases risk for incontinence and prolapse later in adult life cannot be reached from currently available randomized and cohort studies.

Key Question 5. Episiotomy and Future Sexual Function

The studies addressing this question need to be considered in two groups: mediolateral episiotomy and median episiotomy. From the clinical trials of episiotomy strategy—liberal versus restrictive—one trial addressed each type of incision and one directly compared the two incision types. None found substantive differences in sexual function. The preponderance of the studies, however, supported a conclusion that degree of perineal trauma is associated with probability of pain with intercourse, in a dose-response fashion such that greater perineal injury is associated with greater probability of pain.

Measures that are more complex than those typically used in this literature are needed to understand properly the relationships between perineal trauma and future sexual function. Specific factors such as prior sexual function and current libido, in addition to factors such as duration of second-stage labor, size of infant, and lactation status, need to be incorporated into multivariable models to derive more

informative and less biased estimates of the long-term effects of episiotomy or to determine that they do not exist.

Limitations

Deficiencies in the Literature

The available studies that met our inclusion criteria for this systematic review contained numerous (and commonly encountered) deficiencies. These included variations in episiotomy rate, violations of protocol, inconsistent reporting of the definitions of measures, inadequate reporting of statistics, infrequent a priori designation of primary and secondary outcomes, infrequent masking of the assessor, infrequent use of multivariate modeling, and infrequent use of validated outcome measures. In all, much of this literature could be regarded as fair in quality, with some studies of good quality and a few of poor quality.

Limitations to Our Review Procedures

Our review process also had some limitations. Because of time and resource constraints, we did not conduct dual, independent, blinded review of articles for inclusion or abstraction of information into evidence tables. Instead, one reviewer performed the initial review, and a second reviewer examined that input and recommended changes. Differences were reconciled between the two reviewers. We used dual review for grading the quality of individual articles, allowing us to evaluate rigorously systematic bias in these assessments.

Future Research

Currently, the evidence suggests that the putative benefits of episiotomy do not outweigh its harms. Instead, outcomes from episiotomy are worse because some proportion of women who would have had lesser injury instead had a surgical incision.

If episiotomy were restricted to indicated uses, an important question remains for women and their care providers: Which, if any, of the prevailing indications for episiotomy are supported by an adequate research base? A two-stage research agenda could address this need. First, a systematic review may clarify current knowledge about outcomes of episiotomy for the leading presumed indications. Second, primary data collection may be needed to fill in research gaps identified by such a review and to improve understanding of whether these are indeed indications for episiotomy.

Work relating to this latter part of such a research agenda is under way on several topics. This work includes a recent publication of a retrospective cohort study that suggests that episiotomy conferred no benefit in averting neonatal injury at the time of births that had been complicated by shoulder dystocia.⁵⁴ Additional evidence will be required to investigate fully what circumstances should be considered indications for episiotomy.

Furthermore, if the professional community accepts that routine episiotomy is not an effective means to reduce perineal injury, then that attitude should enable them to redouble efforts to understand fully various other approaches to attending the second stage of labor that can promote maternal and infant safety, minimize perineal trauma, and maximize maternal comfort. These steps might include giving attention to maternal position, avoiding fundal pressure, reducing coached pushing, providing perineal support, and employing “hands poised” versus “hands on” techniques to support the perineum. The role for lubrication and types of lubrication for use during crowning of the infant head are other important research topics that warrant more rigorous investigation.

To understand pelvic floor defects and childbirth experiences properly, including history of episiotomy, studies need to be designed to identify populations of women who have a known episiotomy history. In this way, researchers can evaluate continence and pelvic organ prolapse status in the age groups between 40 and 70 years.

Conclusion

Our systematic review finds no health benefits from episiotomy. We found fair to good evidence suggesting that the immediate outcomes for routine (liberal-use policies) episiotomy are no better than those for indicated use of episiotomy under more restrictive-use policies. Indeed, routine use is harmful to the degree that it creates a surgical incision of greater extent than many women might have experienced had episiotomy not been performed. Weak trial evidence, consistent with observational data, suggests that the harms of midline episiotomy are greater than the harms of mediolateral episiotomy.

For episiotomy repair, fair to good evidence, albeit across different comparisons of methods and materials, suggests that leaving the perineal skin unsutured may confer some benefit; if suturing is indicated, then a continuous, subcuticular method is better than an interrupted, transcutaneous method. Regarding suture material, the evidence is consistent and clear that absorbable sutures are preferred and that polyglycolic-acid sutures have significantly less perineal morbidity associated with them. Newer materials, such as tissue adhesive, may offer further benefits, but the data are at present wholly inadequate to inform care practices.

The level of evidence for long-term sequelae, specifically fecal and urinary incontinence, pelvic floor function, and future sexual function, is fair to poor. Nonetheless, it is consistent in demonstrating the lack of benefit of the procedure in a comparatively early timeframe. For women in later adult life, when morbidity is most likely to occur in the form of severe and persistent incontinence or pelvic organ prolapse, the expected results of routine episiotomy are unknown.

Availability of the Full Report

The full evidence report from which this summary was taken was prepared for the Agency for Healthcare Research and Quality (AHRQ) by the RTI-UNC Evidence-based Practice Center, under Contract No. 290-02-0016. It is expected to be available in May 2005, *The Use of Episiotomy in Obstetrical Care: A Systematic Review*. In addition, Internet users will be able to access the report and this summary online through AHRQ's Web site at www.ahrq.gov.

Suggested Citation

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